IN THE CLAIMS

1-19 Canceled

20. (Currently Amended) A device (10) for measuring accelerations for a vehicle passenger protection system, the device being adapted to a prespecified main direction of measurement (20) and comprising:

at least one first acceleration sensor (12) with a first sensitivity direction (14), which forms a first main projection (22) onto the main direction of measurement (20), and a first transverse projection (32) onto a transverse direction (30) which is aligned vertically to the main direction of measurement (20), and a first evaluation channel for processing a first measuring signal from the first acceleration sensor in relation to a first reference value (R1);

a second acceleration sensor (16) with a second sensitivity direction (18), which forms a second main projection (24) onto the main direction of measurement (20), and a second transverse projection (34) onto the transverse direction (30), and a second evaluation channel for processing a second measuring signal from the second acceleration sensor in relation to a second reference value (R2); and

evaluation devices for evaluating at least the first processed measuring signal (F1) and the second processed measuring signal (F2), and, at least partially, a trigger signal for the passenger protection system, which is generated based on the first measuring signal and the second measuring signal; wherein the first and second transverse projections (32, 24) in the first and second sensitivity directions (14, 18) are aligned parallel to each other, and the first and second main projection (22, 24) in the first and second sensitivity directions (14, 18) are aligned antiparallel to each other; and the evaluation is conducted in such a manner that at least a partial error compensation results when the first or second reference value (R1 or R2) in the first or second evaluation channel changes<u>, wherein the trigger signal is used to activate the passenger protection system when it is determined that the vehicle has been in</u>

a crash.

21. (Previously Presented) A device according to claim 20, wherein the evaluation is conducted in such a way dependant on the alignment of the first and second sensitivity direction to the main direction of measurement that the error compensation is at a maximum level when the first and second reference value ($\Delta 1$ and $\Delta 2$) is changed.

22. (Previously Presented) A device according to claim 20, wherein a first evaluation channel comprises a first initial threshold (T1) and the second evaluation channel comprises a second initial threshold (T2), and the evaluation comprising a comparison of a first evaluation function of the processed first measuring signal and the second processed measuring signal (F1) with a corresponding second evaluation function of the first initial threshold (T1) and the second initial threshold (T2).

23. (Previously Presented) A device according to claim 22, wherein the first evaluation function is a weighted difference or total of the processed first measuring signal F1) and the processed second measuring signal (F2), and the corresponding second evaluation function can be a weighted total or the difference between the first initial threshold (T1) and the second initial threshold (T2).

24. (Previously Presented) A device according to claim 20, wherein the first reference value (R1) and the second reference value (R2) are a reference value shared by the first and second evaluation channel.

25. (Previously Presented) A device according to claim 20, wherein an angular distance of the first sensitivity direction (14) and the angular distance of the second sensitivity direction (18) preferably does not equal 0° or 90°, both in the main direction of measurement (20) and in the transverse direction, and is in particular

larger than or equal to 10°.

26. (Previously Presented) A device according to claim 20, wherein an angular distance between the first sensitivity direction (14) and the second sensitivity direction (18) is essentially 90°.

27. (Previously Presented) A device according to claim 20, wherein the angle of the first sensitivity direction (14) can be 45° or 135°, and the angle of the second sensitivity direction is essentially 45° and 135,° or -45°and –135°, or 225° and 315° to the main direction of measurement (20), and the angle of the second sensitivity direction (18) is essentially 135° and 45°, or –135° and –45°, or 315° or 225° to the main direction of measurement (20).

28. (Previously Presented) A device according to claim 20, wherein the main direction of measurement (20) is essentially the forwards direction (26) of the vehicle.

29. (Previously Presented) A device according to claim 20, wherein the main direction of measurement (20) is essentially vertical to the forwards direction (26) of the vehicle.

30. (Previously Presented) A device according to claim 20, wherein the first and second acceleration sensor (12, 16) and the evaluation devices are arranged in one central unit.

31. (Previously Presented) A device according to claim 20 further comprising:

at least one upfront sensor (40) or at least one side sensor (42) or a safing sensor (44).

32. (Currently Amended) A procedure for measuring accelerations for a vehicle passenger protection system comprising:

i) determining a main direction of measurement (20) in relation to a forwards direction (26) of a vehicle;

ii) providing a first acceleration sensor (12) with a first sensitivity direction (14), which forms a first main projection (22) onto the main direction of measurement (20), and a first transverse projection (32) onto a transverse direction (30) which is aligned vertically to the main direction of measurement (20);

iii) providing a second acceleration sensor (26) with a second sensitivity direction (18), which forms a second main projection (24) onto the main direction of measurement (20), and a second transverse projection (24) onto a transverse direction (30), wherein the first and second transverse projection (32, 24) of the first and second sensitivity direction (14, 18) are parallel to each other, and the first and second main projection (22, 24) of the first and second sensitivity direction (14, 18) are antiparallel to each other;

iv) processing a first measuring signal from the first acceleration sensor (12) to form a first processed signal (F1) in relation to a first reference value (R1) in a first evaluation channel for processing the first signal from the first acceleration sensor (12);

v) processing a second measuring signal from the second acceleration sensor (16) to form a second processed signal (F2) in relation to a second reference value (R2) in a second evaluation channel for processing a second signal from the second acceleration sensor (16); and

vi) evaluating the first and second processed signal (F1 and F2) in relation to a corresponding first and second initial threshold (T1 and T2), so that at least a partial error compensation results when the first and second reference values (R1 and R2) in the first and second evaluation channel change<u>, wherein the passenger</u>

protection system is activated when it is determined that the vehicle has been in a crash.

33. (Previously Presented) A procedure according to claim 32, wherein the evaluation dependant on the alignment of the first and second sensitivity direction to the main direction of measurement is conducted in such a manner that the error compensation when the first and second reference value is changed is at the maximum level.

34. (Previously Presented) A procedure according to claim 32, wherein the evaluation in stage vi) further comprises:

a) forming a weighted threshold summation function or threshold subtraction function for the first initial threshold (T1) and the second initial threshold (T2);

b) forming a weighted subtraction function or summation function of the processed first measuring signal (F1) and the processed second measuring signal (F2);

c) comparing the weighted subtraction function or summation function from stage b) with the weighted threshold summation function or threshold subtraction function from stage a); and whereby the trigger signal is furthermore set into the trigger-ready state when the weighted subtraction function or summation function from stage b) exceeds the weighted threshold summation function or threshold subtraction function from stage a).

35. (Currently Amended) A procedure according to claim 34, wherein in stage b), the weighted subtraction function or summation function of the processed first measuring signal (F1) and the processed second measuring signal (F2) comprises the formula

$$a1*F1 - a2*F2 \quad \text{or} \quad a1*F1 + a2*F2$$

and a1 and a2 are scaling factors with $0 < b1, b2 < 1$, and in stage a), the weighted threshold summation function or threshold subtraction function of the first initial value (T1) and the second initial value (T2) comprise the formula

$$b1*T1 - b2*T2 \qquad \text{or} \qquad b1*T1 + b2*T2$$

~~whereby~~ wherein b1 and b2 are scaling factors with $0 < b1, b2 < 1$.

36. (Previously Presented) A procedure according to claim 35, wherein $a1 \approx \cos \alpha 1$ and $a2 \approx \cos \alpha 2$,

wherein $\alpha 1$ is the angle between the main direction of measurement (20) and the first sensitivity direction (14), and $\alpha 2$ is the angle between the main direction of measurement (20) and the second sensitivity direction (18).

37. (Previously Presented) A procedure according to claim 32, wherein the first reference value (R1) and the second reference value (R2) are a reference value shared by the first and second evaluation channel.

38. (Previously Presented) A procedure according to claim 32, wherein in stages iv) and v) the processing of the first, or measuring, signal of the first, or acceleration, sensor (12 and 16) during the procedure comprises at least one integration of the measuring signal.